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(54) **Speedometer alarm**

(57) A speedometer assembly comprising a speedometer for a vehicle and an alarm device to provide a warning for the driver when the speed of his vehicle rises to or exceeds a predetermined value. In a preferred form of the invention the assembly has control means by which the driver can select the predetermined value of vehicle speed at which the warning is required.

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## SPECIFICATION

### Speedometer assemblies

5 This invention relates to speedometer assemblies for use in vehicles, especially road vehicles, which provide a means of warning the driver of the vehicle that the vehicle is travelling at a speed greater than a desired maximum.

10 Speed limits for motor vehicles travelling on public highways are established by law in many countries, and it is common practice for different speed limits to apply to different types of highway and/or at different times of the day and night.

15 Although motor road vehicles are normally required by law to be equipped with a speedometer indicating the road speed of the vehicle at any moment in time, in order fully to comply with a prevailing maximum speed limit it is necessary for the driver of the vehicle

20 to keep a constant watch on the speedometer to ensure that the speed limit is not exceeded. In practice this continual watch presents substantial practical difficulties. For example, in busy traffic conditions the driver is able to observe the speedo-

25 meter only at infrequent intervals and in between successive observations it is quite easy for the speed of the vehicle gradually to increase until it exceeds the speed limit. This risk is accentuated by recent improvements in the sound insulation of motor

30 vehicles which exclude from the passenger compartment, to a large extent, the noise of the engine and the noise of the tyres on the road.

According to the present invention I have devised a means by which the driver of a vehicle can be made aware that the speed of this vehicle exceeds the prevailing maximum speed limit. Accordingly, in one aspect the invention provides a speedometer assembly comprising:

a speedometer for a vehicle; and

40 an alarm device operatively connected to the speedometer so as to provide a warning for the driver of the vehicle when the speed of the vehicle equipped with the speedometer rises to or exceeds a pre-determined value.

45 The alarm device can take any convenient form; for example it can be a visual means incorporating, for instance, a warning light; and where the warning is a visual means it is conveniently disposed on the dashboard, preferably adjacent the speedometer

50 or in some other position which is readily observable by the driver. The warning can take another form, for example an audible warning; and where this type of warning is used its location will be largely dictated by convenience in the electrical circuitry of the

55 vehicle. If desired, the alarm device can provide more than one type of warning (for example a visual and an audible warning) and such arrangements have the advantage that the driver becomes aware of the warning whether or not the visual warning is readily discerned by his eye.

60 The period of the time for which the warning given by the alarm device is a matter of choice. It one form the warning continues (on a continuous or intermittent basis) for the period during which the speed of the vehicle remains over the predetermined speed

value and is discontinued once the vehicle road speed falls below that value. However, if desired the warning given by the alarm device can be given for only a short time after the road speed exceeds the

70 predetermined value and then, the driver having been alerted to his excess speed, the warning is discontinued. It will be appreciated that where more than one type of warning is given by the alarm device both of the aforesaid modes of operation can

75 be adopted; for example, where the alarm gives a visual and an audible warning the audible warning can be discontinued after a short period while the visual warning remains operative until such time as the road speed of the vehicle falls below the

80 predetermined value.

A modification of the alarm device referred to above provides for a short time delay between the predetermined road speed value being exceeded and the beginning of the warning, the warning only

85 being actuated when the road speed has exceeded said predetermined value for a predetermined amount of time. By means of this modification the warning, whether audible, visual or otherwise, will not be actuated where the road speed rises for only a

90 very short time over the predetermined value but it will be actuated when the speed has remained over the predetermined value for a suitable length of time which can be, for example one, two, five or ten seconds.

95 For vehicles intended for use in territories where only one speed limit is effective the operative connection between the speedometer and the alarm device can be such that the warning is given only in response to one predetermined speed value, for

100 which the assembly is designed. However, in general it is desirable for the predetermined value to be set by the driver in response to local conditions. Accordingly, in one form of the invention the assembly has a setting means for the alarm device whereby the

105 driver can set the predetermined speed value. Such setting means can, for example, include a pointer or other indicator adapted to indicate on the speedometer display or other suitable display means the speed at which the alarm is to be actuated, the

110 indicator being controlled by manual adjustment by the driver.

The alarm device can be operatively connected, for example, so as to be actuated by the speedometer needle or other display means or in some other way, for example, by the speedometer drive means connecting the road wheels and the speedometer display. The invention includes the use as speedometer of a dial (or other analogue) speedometer and digital speedometers.

120 The speedometer assembly of the invention can be incorporated into new vehicles at the time of manufacture or as an accessory subsequently by the user.

### 125 CLAIMS

1. A speedometer assembly comprising:
  - a speedometer for a vehicle; and
  - an alarm device operatively connected to the
- 130 speedometer so as to provide a warning for the

driver of the vehicle when the speed of the vehicle equipped with the speedometer rises to or exceeds a pre-determined value.

2. A speedometer assembly according to Claim 5 1, in which the alarm device is one which gives a warning that continues for as long as the speed of the vehicle equals or exceeds the pre-determined value.

3. A speedometer assembly according to Claim 10 1, in which the alarm device is one which gives a warning for only one, two, five or ten seconds or other short period beginning when the speed of the vehicle first rises to or exceeds said pre-determined value.

4. A speedometer assembly according to Claim 15 1, 2 or 3, having delay means which temporarily delays the warning signal being given when the speed of the vehicle first rises to or exceeds the pre-determined value.

5. A speedometer assembly according to any of the preceding claims, having control means by which the driver of the vehicle can select the predetermined value.

6. A speedometer assembly according to Claim 25 1, substantially as described herein.